Abstract

The invention relates to a method for removing hydrogen sulphide and other acidic gas components from pressurized technical gases by means of a physical detergent and for obtaining sulphur from hydrogen sulphide by using a Claus system. The hydrogen sulphide and the other acidic gas components are removed in an absorbent manner from the physical detergent, the physical detergent undergoes multi-step regeneration, said multi-step regeneration comprising at least one device for CO enrichment, a device for H_2S enrichment, a device for CO_2 stripping and a device for thermal regeneration. The various regeneration steps consist of various pressure steps and have a lower pressure than that of the absorption. A hydrogen sulphide rich Claus gas is withdrawn from one of the regeneration steps and is guided to a Claus system where sulphur is produced. The residual gas exiting from the Claus system is hydrated and is condensed under pressure, corresponding to one of the regeneration steps. The condensed residual gas is guided into said device which is used for CO enrichment. Said device for CO enrichment can be embodied as a flash column.